Amendment to the Abstract:

The Abstract has been amended.

ABSTRACT

To provide estimating apparatus and method of the optical distortion of light transmitted through a transparent plate-shaped body.

Upon picking-up a grid pattern 2 via a glass plate 3 by an image pickup device means 4, $4n\pm\alpha$ CCD pixels correspond to n grids (pair of a bright portion and a dark portion), thereby generating α moire fringes. Sine waves with a phase A and sine waves with a phase B deviated from the phase A by 90° are generated based on gray data of the picked-up image in this state. A phase angle at each pixel on the Lissajous figure is calculated based on the sine waves with the phases A and B, and the refractive power is calculated based on a phase angular speed, serving as the difference between the phase angles of the pixels.